

SEQUENCE LISTING

<110> Foster, Donald C.
 Xu, Wenfeng
 Madden, Karen L.
 Kelly, James D.
 Sprecher, Cindy A.
 Brandt, Cameron S.
 Rixon, Mark W.
 Presnell, Scott R.
 Fox, Brian A.

<120> Soluble Interleukin-20 Receptor

<130> 99-107

<150> 60/171,966

<151> 1999-12-23

<150> 60/213,416

<151> 2000-06-22

<160> 72

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<210> 1

<211> 176

<212> PRT

<213> Homo sapiens

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Leu	Leu	Trp	Thr	Pro	Ser	Thr	Gly	Leu	Lys	Thr	Leu	Asn	Leu	Gly	Ser
			20				25						30		
Cys	Val	Ile	Ala	Thr	Asn	Leu	Gln	Glu	Ile	Arg	Asn	Gly	Phe	Ser	Asp
		35				40					45				
Ile	Arg	Gly	Ser	Val	Gln	Ala	Lys	Asp	Gly	Asn	Ile	Asp	Ile	Arg	Ile
	50				55					60					
Leu	Arg	Arg	Thr	Glu	Ser	Leu	Gln	Asp	Thr	Lys	Pro	Ala	Asn	Arg	Cys
65				70					75					80	

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Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe Lys
 85 90 95
 Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser Ser Leu
 100 105 110
 Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu Cys His Ala
 115 120 125
 His Met Thr Cys His Cys Gly Glu Glu Ala Met Lys Lys Tyr Ser Gln
 130 135 140
 Ile Leu Ser His Phe Glu Lys Leu Glu Pro Gln Ala Ala Val Val Lys
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 Ala Leu Gly Glu Leu Asp Ile Leu Leu Gln Trp Met Glu Glu Thr Glu
 165 170 175

<210> 2

<211> 152

<212> PRT

<213> Homo sapiens

<400> 2

Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile Ala Thr Asn Leu Gln
 1 5 10 15
 Glu Ile Arg Asn Gly Phe Ser Asp Ile Arg Gly Ser Val Gln Ala Lys
 20 25 30
 Asp Gly Asn Ile Asp Ile Arg Ile Leu Arg Arg Thr Glu Ser Leu Gln
 35 40 45
 Asp Thr Lys Pro Ala Asn Arg Cys Cys Leu Leu Arg His Leu Leu Arg
 50 55 60
 Leu Tyr Leu Asp Arg Val Phe Lys Asn Tyr Gln Thr Pro Asp His Tyr
 65 70 75 80
 Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys
 85 90 95
 Lys Asp Leu Arg Leu Cys His Ala His Met Thr Cys His Cys Gly Glu
 100 105 110
 Glu Ala Met Lys Lys Tyr Ser Gln Ile Leu Ser His Phe Glu Lys Leu
 115 120 125
 Glu Pro Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu
 130 135 140
 Leu Gln Trp Met Glu Glu Thr Glu
 145 150

<210> 3

<211> 151

<212> PRT

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<213> Homo sapiens

<400> 3

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Met Lys Ala Ser Ser Leu Ala Phe Ser Leu Leu Ser Ala Ala Phe Tyr
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Leu Leu Trp Thr Pro Ser Thr Gly Leu Lys Thr Leu Asn Leu Gly Ser
      20              25              30
Cys Val Ile Ala Thr Asn Leu Gln Glu Ile Arg Asn Gly Phe Ser Asp
      35              40              45
Ile Arg Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile
      50              55              60
Leu Arg Arg Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys
      65              70              75              80
Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe Lys
      85              90              95
Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser Ser Leu
      100              105              110
Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu Cys Leu Glu
      115              120              125
Pro Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu Leu
      130              135              140
Gln Trp Met Glu Glu Thr Glu
      145              150

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<210> 4

<211> 127

<212> PRT

<213> Homo sapiens

<400> 4

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Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile Ala Thr Asn Leu Gln
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Glu Ile Arg Asn Gly Phe Ser Asp Ile Arg Gly Ser Val Gln Ala Lys
      20              25              30
Asp Gly Asn Ile Asp Ile Arg Ile Leu Arg Arg Thr Glu Ser Leu Gln
      35              40              45
Asp Thr Lys Pro Ala Asn Arg Cys Cys Leu Leu Arg His Leu Leu Arg
      50              55              60
Leu Tyr Leu Asp Arg Val Phe Lys Asn Tyr Gln Thr Pro Asp His Tyr
      65              70              75              80
Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys
      85              90              95

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Lys Asp Leu Arg Leu Cys Leu Glu Pro Gln Ala Ala Val Val Lys Ala
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 Leu Gly Glu Leu Asp Ile Leu Leu Gln Trp Met Glu Glu Thr Glu
 115 120 125

<210> 5
 <211> 176
 <212> PRT
 <213> Mus musculus

<400> 5
 Met Lys Gly Phe Gly Leu Ala Phe Gly Leu Phe Ser Ala Val Gly Phe
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 Leu Leu Trp Thr Pro Leu Thr Gly Leu Lys Thr Leu His Leu Gly Ser
 20 25 30
 Cys Val Ile Thr Ala Asn Leu Gln Ala Ile Gln Lys Glu Phe Ser Glu
 35 40 45
 Ile Arg Asp Ser Val Gln Ala Glu Asp Thr Asn Ile Asp Ile Arg Ile
 50 55 60
 Leu Arg Thr Thr Glu Ser Leu Lys Asp Ile Lys Ser Leu Asp Arg Cys
 65 70 75 80
 Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val Phe Lys
 85 90 95
 Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser Ser Leu
 100 105 110
 Ala Asn Ser Phe Leu Ile Ile Lys Lys Asp Leu Ser Val Cys His Ser
 115 120 125
 His Met Ala Cys His Cys Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln
 130 135 140
 Ile Leu Ser His Phe Ile Glu Leu Glu Leu Gln Ala Ala Val Val Lys
 145 150 155 160
 Ala Leu Gly Glu Leu Gly Ile Leu Leu Arg Trp Met Glu Glu Met Leu
 165 170 175

<210> 6
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 <212> PRT
 <213> Mus musculus

<400> 6
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 1 5 10 15

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Ala Ile Gln Lys Glu Phe Ser Glu Ile Arg Asp Ser Val Gln Ala Glu
 20 25 30
 Asp Thr Asn Ile Asp Ile Arg Ile Leu Arg Thr Thr Glu Ser Leu Lys
 35 40 45
 Asp Ile Lys Ser Leu Asp Arg Cys Cys Phe Leu Arg His Leu Val Arg
 50 55 60
 Phe Tyr Leu Asp Arg Val Phe Lys Val Tyr Gln Thr Pro Asp His His
 65 70 75 80
 Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Ile Ile Lys
 85 90 95
 Lys Asp Leu Ser Val Cys His Ser His Met Ala Cys His Cys Gly Glu
 100 105 110
 Glu Ala Met Glu Lys Tyr Asn Gln Ile Leu Ser His Phe Ile Glu Leu
 115 120 125
 Glu Leu Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Gly Ile Leu
 130 135 140
 Leu Arg Trp Met Glu Glu Met Leu
 145 150

<210> 7

<211> 144

<212> PRT

<213> Mus musculus

<400> 7

Cys Val Ile Thr Ala Asn Leu Gln Ala Ile Gln Lys Glu Phe Ser Glu
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 Ile Arg Asp Ser Val Gln Ala Glu Asp Thr Asn Ile Asp Ile Arg Ile
 20 25 30
 Leu Arg Thr Thr Glu Ser Leu Lys Asp Ile Lys Ser Leu Asp Arg Cys
 35 40 45
 Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val Phe Lys
 50 55 60
 Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser Ser Leu
 65 70 75 80
 Ala Asn Ser Phe Leu Ile Ile Lys Lys Asp Leu Ser Val Cys His Ser
 85 90 95
 His Met Ala Cys His Cys Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln
 100 105 110
 Ile Leu Ser His Phe Ile Glu Leu Glu Leu Gln Ala Ala Val Val Lys
 115 120 125
 Ala Leu Gly Glu Leu Gly Ile Leu Leu Arg Trp Met Glu Glu Met Leu
 130 135 140

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<210> 8
 <211> 154
 <212> PRT
 <213> Mus musculus

<400> 8

Met Lys Gly Phe Gly Leu Ala Phe Gly Leu Phe Ser Ala Val Gly Phe
 1 5 10 15
 Leu Leu Trp Thr Pro Leu Thr Gly Leu Lys Thr Leu His Leu Gly Ser
 20 25 30
 Cys Val Ile Thr Ala Asn Leu Gln Ala Ile Gln Lys Glu Phe Ser Glu
 35 40 45
 Ile Arg Asp Ser Val Ser Leu Asp Arg Cys Cys Phe Leu Arg His Leu
 50 55 60
 Val Arg Phe Tyr Leu Asp Arg Val Phe Lys Val Tyr Gln Thr Pro Asp
 65 70 75 80
 His His Thr Leu Arg Lys Ile Ser Ser Leu Ala Asn Ser Phe Leu Ile
 85 90 95
 Ile Lys Lys Asp Leu Ser Val Cys His Ser His Met Ala Cys His Cys
 100 105 110
 Gly Glu Glu Ala Met Glu Lys Tyr Asn Gln Ile Leu Ser His Phe Ile
 115 120 125
 Glu Leu Glu Leu Gln Ala Ala Val Val Lys Ala Leu Gly Glu Leu Gly
 130 135 140
 Ile Leu Leu Arg Trp Met Glu Glu Met Leu
 145 150

<210> 9
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 9

Leu Lys Thr Leu His Leu Gly Ser Cys Val Ile Thr Ala Asn Leu Gln
 1 5 10 15
 Ala Ile Gln Lys Glu Phe Ser Glu Ile Arg Asp Ser Val Ser Leu Asp
 20 25 30
 Arg Cys Cys Phe Leu Arg His Leu Val Arg Phe Tyr Leu Asp Arg Val
 35 40 45
 Phe Lys Val Tyr Gln Thr Pro Asp His His Thr Leu Arg Lys Ile Ser
 50 55 60

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Ser Leu Ala Asn Ser Phe Leu Ile Ile Lys Lys Asp Leu Ser Val Cys
 65 70 75 80
 His Ser His Met Ala Cys His Cys Gly Glu Ala Met Glu Lys Tyr
 85 90 95
 Asn Gln Ile Leu Ser His Phe Ile Glu Leu Glu Leu Gln Ala Ala Val
 100 105 110
 Val Lys Ala Leu Gly Glu Leu Gly Ile Leu Leu Arg Trp Met Glu Glu
 115 120 125
 Met Leu
 130

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 <213> Homo sapiens
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 gcgtggcagc cagagcccca ggcgcggagc tgaggccgcg cggccgcgtc tggcccccagc 180
 gggcgtggga ctgagcagtc tgctgcccc cgacatgtga cccagccccg ccggcc atg 239
 Met
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 cgg gct ccc ggc cgc ccg gcc ctg cgg ccg ctg ccg ctg ccg ccg ctg 287
 Arg Ala Pro Gly Arg Pro Ala Leu Arg Pro Leu Pro Leu Pro Pro Leu
 5 10 15
 ctg ctg ttg ctc ctg gcg gcg cct tgg gga cgg gca gtt ccc tgt gtc 335
 Leu Leu Leu Leu Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys Val
 20 25 30
 tct ggt ggt ttg cct aaa cct gca aac atc acc ttc tta tcc atc aac 383
 Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn
 35 40 45
 atg aag aat gtc cta caa tgg act cca cca gag ggt ctt caa gga gtt 431
 Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val
 50 55 60 65

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Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp	
70 75 80	
ctg aat aaa tca gaa tgc aga aat atc aat aga acc tac tgt gat ctt	527
Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu	
85 90 95	
tct gct gaa act tct gac tac gaa cac cag tat tat gcc aaa gtt aag	575
Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys	
100 105 110	
gcc att tgg gga aca aag tgt tcc aaa tgg gct gaa agt gga cgg ttc	623
Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe	
115 120 125	
tat cct ttt tta gaa aca caa att ggc cca cca gag gtg gca ctg act	671
Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr	
130 135 140 145	
aca gat gag aag tcc att tct gtt gtc ctg aca gct cca gag aag tgg	719
Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp	
150 155 160	
aag aga aat cca gaa gac ctt cct gtt tcc atg caa caa ata tac tcc	767
Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser	
165 170 175	
aat ctg aag tat aac gtg tct gtg ttg aat act aaa tca aac aga acg	815
Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr	
180 185 190	
tgg tcc cag tgt gtg acc aac cac acg ctg gtg ctc acc tgg ctg gag	863
Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu	
195 200 205	
ccg aac act ctt tac tgc gta cac gtg gag tcc ttc gtc cca ggg ccc	911
Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro	
210 215 220 225	
cct cgc cgt gct cag cct tct gag aag cag tgt gcc agg act ttg aaa	959

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230 235 240	
gat caa tca tca gag ttc aag gct aaa atc atc ttc tgg tat gtt ttg	1007
Asp Gln Ser Ser Glu Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val Leu	
245 250 255	
ccc ata tct att acc gtg ttt ctt ttt tct gtg atg ggc tat tcc atc	1055
Pro Ile Ser Ile Thr Val Phe Leu Phe Ser Val Met Gly Tyr Ser Ile	
260 265 270	
tac cga tat atc cac gtt ggc aaa gag aaa cac cca gca aat ttg att	1103
Tyr Arg Tyr Ile His Val Gly Lys Glu Lys His Pro Ala Asn Leu Ile	
275 280 285	
ttg att tat gga aat gaa ttt gac aaa aga ttc ttt gtg cct gct gaa	1151
Leu Ile Tyr Gly Asn Glu Phe Asp Lys Arg Phe Phe Val Pro Ala Glu	
290 295 300 305	
aaa atc gtg att aac ttt atc acc ctc aat atc tcg gat gat tct aaa	1199
Lys Ile Val Ile Asn Phe Ile Thr Leu Asn Ile Ser Asp Asp Ser Lys	
310 315 320	
att tct cat cag gat atg agt tta ctg gga aaa agc agt gat gta tcc	1247
Ile Ser His Gln Asp Met Ser Leu Leu Gly Lys Ser Ser Asp Val Ser	
325 330 335	
agc ctt aat gat cct cag ccc agc ggg aac ctg agg ccc cct cag gag	1295
Ser Leu Asn Asp Pro Gln Pro Ser Gly Asn Leu Arg Pro Pro Gln Glu	
340 345 350	
gaa gag gag gtg aaa cat tta ggg tat gct tcg cat ttg atg gaa att	1343
Glu Glu Glu Val Lys His Leu Gly Tyr Ala Ser His Leu Met Glu Ile	
355 360 365	
ttt tgt gac tct gaa gaa aac acg gaa ggt act tct ttc acc cag caa	1391
Phe Cys Asp Ser Glu Glu Asn Thr Glu Gly Thr Ser Phe Thr Gln Gln	
370 375 380 385	
gag tcc ctc agc aga aca ata ccc ccg gat aaa aca gtc att gaa tat	1439
Glu Ser Leu Ser Arg Thr Ile Pro Pro Asp Lys Thr Val Ile Glu Tyr	
390 395 400	

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tcg cag gca gcg ttg gca gtc ttg ggc ccg caa acg tta cag tac tca Ser Gln Ala Ala Leu Ala Val Leu Gly Pro Gln Thr Leu Gln Tyr Ser 435 440 445	1583
tac acc cct cag ctc caa gac tta gac ccc ctg gcg cag gag cac aca Tyr Thr Pro Gln Leu Gln Asp Leu Asp Pro Leu Ala Gln Glu His Thr 450 455 460 465	1631
gac tcg gag gag ggg ccg gag gaa gag cca tcg acg acc ctg gtc gac Asp Ser Glu Glu Gly Pro Glu Glu Glu Pro Ser Thr Thr Leu Val Asp 470 475 480	1679
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<210> 11

<211> 553

<212> PRT

<213> Homo sapiens

<400> 11

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Met Arg Ala Pro Gly Arg Pro Ala Leu Arg Pro Leu Pro Leu Pro Pro
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Leu Leu Leu Leu Leu Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys
          20          25          30
Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile
          35          40          45
Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly
          50          55          60
Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys
          65          70          75          80
Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp
          85          90          95

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Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val
 100 105 110
 Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg
 115 120 125
 Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu
 130 135 140
 Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys
 145 150 155 160
 Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr
 165 170 175
 Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg
 180 185 190
 Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu
 195 200 205
 Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly
 210 215 220
 Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu
 225 230 235 240
 Lys Asp Gln Ser Ser Glu Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val
 245 250 255
 Leu Pro Ile Ser Ile Thr Val Phe Leu Phe Ser Val Met Gly Tyr Ser
 260 265 270
 Ile Tyr Arg Tyr Ile His Val Gly Lys Glu Lys His Pro Ala Asn Leu
 275 280 285
 Ile Leu Ile Tyr Gly Asn Glu Phe Asp Lys Arg Phe Phe Val Pro Ala
 290 295 300
 Glu Lys Ile Val Ile Asn Phe Ile Thr Leu Asn Ile Ser Asp Asp Ser
 305 310 315 320
 Lys Ile Ser His Gln Asp Met Ser Leu Leu Gly Lys Ser Ser Asp Val
 325 330 335
 Ser Ser Leu Asn Asp Pro Gln Pro Ser Gly Asn Leu Arg Pro Pro Gln
 340 345 350
 Glu Glu Glu Glu Val Lys His Leu Gly Tyr Ala Ser His Leu Met Glu
 355 360 365
 Ile Phe Cys Asp Ser Glu Glu Asn Thr Glu Gly Thr Ser Phe Thr Gln
 370 375 380
 Gln Glu Ser Leu Ser Arg Thr Ile Pro Pro Asp Lys Thr Val Ile Glu
 385 390 395 400
 Tyr Glu Tyr Asp Val Arg Thr Thr Asp Ile Cys Ala Gly Pro Glu Glu
 405 410 415
 Gln Glu Leu Ser Leu Gln Glu Glu Val Ser Thr Gln Gly Thr Leu Leu
 420 425 430

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Glu Ser Gln Ala Ala Leu Ala Val Leu Gly Pro Gln Thr Leu Gln Tyr
 435 440 445
 Ser Tyr Thr Pro Gln Leu Gln Asp Leu Asp Pro Leu Ala Gln Glu His
 450 455 460
 Thr Asp Ser Glu Glu Gly Pro Glu Glu Glu Pro Ser Thr Thr Leu Val
 465 470 475 480
 Asp Trp Asp Pro Gln Thr Gly Arg Leu Cys Ile Pro Ser Leu Ser Ser
 485 490 495
 Phe Asp Gln Asp Ser Glu Gly Cys Glu Pro Ser Glu Gly Asp Gly Leu
 500 505 510
 Gly Glu Glu Gly Leu Leu Ser Arg Leu Tyr Glu Glu Pro Ala Pro Asp
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<210> 12

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<212> PRT

<213> Homo sapiens

<400> 12

Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
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 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160

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Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln Ser Ser Glu Phe Lys Ala Lys
 210 215 220

<210> 13

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<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (18)...(950)

<400> 13

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 Trp Thr Ser Leu Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu
 15 20 25

ctc aca gat gaa gtg gcc att ctg cct gcc cct cag aac ctc tct gta 146
 Leu Thr Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val
 30 35 40

ctc tca acc aac atg aag cat ctc ttg atg tgg agc cca gtg atc gcg 194
 Leu Ser Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala
 45 50 55

cct gga gaa aca gtg tac tat tct gtc gaa tac cag ggg gag tac gag 242
 Pro Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu
 60 65 70 75

agc ctg tac acg agc cac atc tgg atc ccc agc agc tgg tgc tca ctc 290
 Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu
 80 85 90

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act gaa ggt cct gag tgt gat gtc act gat gac atc acg gcc act gtg	338
Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val	
95 100 105	
cca tac aac ctt cgt gtc agg gcc aca ttg ggc tca cag acc tca gcc	386
Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala	
110 115 120	
tgg agc atc ctg aag cat ccc ttt aat aga aac tca acc atc ctt acc	434
Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr	
125 130 135	
cga cct ggg atg gag atc acc aaa gat ggc ttc cac ctg gtt att gag	482
Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu	
140 145 150 155	
ctg gag gac ctg ggg ccc cag ttt gag ttc ctt gtg gcc tac tgg agg	530
Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg	
160 165 170	
agg gag cct ggt gcc gag gaa cat gtc aaa atg gtg agg agt ggg ggt	578
Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly	
175 180 185	
att cca gtg cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg	626
Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val	
190 195 200	
aag gcc cag aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc	674
Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser	
205 210 215	
cag aca gaa tgt gtg gag gtg caa gga gag gcc att ccc ctg gta ctg	722
Gln Thr Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu	
220 225 230 235	
gcc ctg ttt gcc ttt gtt ggc ttc atg ctg atc ctt gtg gtc gtg cca	770
Ala Leu Phe Ala Phe Val Gly Phe Met Leu Ile Leu Val Val Pro	
240 245 250	
ctg ttc gtc tgg aaa atg ggc cgg ctg ctc cag tac tcc tgt tgc ccc	818
Leu Phe Val Trp Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Pro	
255 260 265	

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gtg gtg gtc ctc cca gac acc ttg aaa ata acc aat tca ccc cag aag 866
 Val Val Val Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys
 270 275 280

tta atc agc tgc aga agg gag gag gtg gat gcc tgt gcc acg gct gtg 914
 Leu Ile Ser Cys Arg Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val
 285 290 295

atg tct cct gag gaa ctc ctc agg gcc tgg atc tca taggtttgcg 960
 Met Ser Pro Glu Glu Leu Leu Arg Ala Trp Ile Ser
 300 305 310

gaaggctcga g 971

<210> 14

<211> 311

<212> PRT

<213> Homo sapiens

<400> 14

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
 1 5 10 15

Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val
 20 25 30

Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
 35 40 45

Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
 50 55 60

Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
 65 70 75 80

His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
 85 90 95

Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
 100 105 110

Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
 115 120 125

His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
 130 135 140

Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
 145 150 155 160

Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala
 165 170 175

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Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
 180 185 190
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205
 Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220
 Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe
 225 230 235 240
 Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp Lys
 245 250 255
 Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val Leu Pro
 260 265 270
 Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys Leu Ile Ser Cys Arg
 275 280 285
 Arg Glu Glu Val Asp Ala Cys Ala Thr Ala Val Met Ser Pro Glu Glu
 290 295 300
 Leu Leu Arg Ala Trp Ile Ser
 305 310

<210> 15

<211> 203

<212> PRT

<213> Homo sapiens

<400> 15

Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
 1 5 10 15
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
 20 25 30
 Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
 35 40 45
 Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
 50 55 60
 Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
 65 70 75 80
 Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
 85 90 95
 Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
 100 105 110
 Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu
 115 120 125
 Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu
 130 135 140

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Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
 145 150 155 160
 Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
 165 170 175
 Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
 180 185 190
 Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro
 195 200

<210> 16
 <211> 33
 <212> DNA
 <213> Homo sapiens

<400> 16
 gcgaattcga gctaccaa tgcagacttt cac 33

<210> 17
 <211> 32
 <212> DNA
 <213> Homo sapiens

<400> 17
 cgctcgagcc ttccgcaaac ctatgagatc ca 32

<210> 18
 <211> 1379
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (132)...(1034)

<400> 18
 tcgaccacag cgctccgcgt gcgactcaga cctcagctcc aacatatgca ttctgaagaa 60
 agatggctga gatggacaga atgctttatt ttgaaagaa acaatgttct aggtcaaact 120
 gagtctacca a atg cag act ttc aca atg gtt cta gaa gaa atc tgg aca 170
 Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr
 1 5 10

agt ctt ttc atg tgg ttt ttc tac gca ttg att cca tgt ttg ctc aca 218

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Ser	Leu	Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr		
15							20				25						
gat	gaa	gtg	gcc	att	ctg	cct	gcc	cct	cag	aac	ctc	tct	gta	ctc	tca	266	
Asp	Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser		
30					35					40					45		
acc	aac	atg	aag	cat	ctc	ttg	atg	tgg	agc	cca	gtg	atc	gcg	cct	gga	314	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly		
				50					55					60			
gaa	aca	gtg	tac	tat	tct	gtc	gaa	tac	cag	ggg	gag	tac	gag	agc	ctg	362	
Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu		
			65				70						75				
tac	acg	agc	cac	atc	tgg	atc	ccc	agc	agc	tgg	tgc	tca	ctc	act	gaa	410	
Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu		
		80					85					90					
ggt	cct	gag	tgt	gat	gtc	act	gat	gac	atc	acg	gcc	act	gtg	cca	tac	458	
Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr		
	95					100					105						
aac	ctt	cgt	gtc	agg	gcc	aca	ttg	ggc	tca	cag	acc	tca	gcc	tgg	agc	506	
Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser ²	Gln	Thr	Ser	Ala	Trp	Ser		
110					115					120					125		
atc	ctg	aag	cat	ccc	ttt	aat	aga	aac	tca	acc	atc	ctt	acc	cga	cct	554	
Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr	Ile	Leu	Thr	Arg	Pro		
				130					135					140			
ggg	atg	gag	atc	ccc	aaa	cat	ggc	ttc	cac	ctg	gtt	att	gag	ctg	gag	602	
Gly	Met	Glu	Ile	Pro	Lys	His	Gly	Phe	His	Leu	Val	Ile	Glu	Leu	Glu		
			145					150					155				
gac	ctg	ggg	ccc	cag	ttt	gag	ttc	ctt	gtg	gcc	tac	tgg	acg	agg	gag	650	
Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala	Tyr	Trp	Thr	Arg	Glu		
		160					165					170					
cct	ggt	gcc	gag	gaa	cat	gtc	aaa	atg	gtg	agg	agt	ggg	ggt	att	cca	698	
Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro		
	175					180					185						

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gtg cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc 746
 Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
 190 195 200 205

cag aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca 794
 Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
 210 215 220

gaa tgt gtg gag gtg caa gga gag gcc att ccc ctg gta ctg gcc ctg 842
 Glu Cys Val Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu
 225 230 235

ttt gcc ttt gtt ggc ttc atg ctg atc ctt gtg gtc gtg cca ctg ttc 890
 Phe Ala Phe Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe
 240 245 250

gtc tgg aaa atg ggc cgg ctg ctc cag tac tcc tgt tgc ccc gtg gtg 938
 Val Trp Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val
 255 260 265

gtc ctc cca gac acc ttg aaa ata acc aat tca ccc cag gtt aat cag 986
 Val Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Val Asn Gln
 270 275 280 285

ctg cag aag gga gga ggt gga tgc ctg tgc cac ggc tgt gat gtc tcc 1034
 Leu Gln Lys Gly Gly Gly Gly Cys Leu Cys His Gly Cys Asp Val Ser
 290 295 300

tgaggaaactc ctcaggccct ggaatcctata tcagggtttgc ggaagggccc aggtgaagcc 1094
 gagaacctgg tctgcatgac atggaaacca tgaggggaca agttgtgttt ctgttttccg 1154
 ccacggacaa gggatgagag aagtaggaag agcctgttgt ctacaagtct agaagcaacc 1214
 atcagaggca ggggtggttg tctaacagaa caactgactg aggcctatggg ggttgatgacc 1274
 tctagacttt gggcttcac ttgcttggt gagcaaccct gggaaaagtg acttcatccc 1334
 ttcggtccca agttttctca tctgtaatgg gggatcccta caaaactg 1382

<210> 19

<211> 301

<212> PRT

<213> Homo sapiens

<400> 19

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
 1 5 10 15

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Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val
 20 25 30
 Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
 35 40 45
 Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
 50 55 60
 Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
 65 70 75 80
 His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
 85 90 95
 Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
 100 105 110
 Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
 115 120 125
 His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
 130 135 140
 Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
 145 150 155 160
 Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala
 165 170 175
 Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
 180 185 190
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205
 Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220
 Glu Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe
 225 230 235 240
 Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp Lys
 245 250 255
 Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val Val Leu Pro
 260 265 270
 Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Val Asn Gln Leu Gln Lys
 275 280 285
 Gly Gly Gly Gly Cys Leu Cys His Gly Cys Asp Val Ser
 290 295 300

<210> 20

<211> 1081

<212> DNA

<213> Homo sapiens

<220>

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<221> CDS

<222> (9)...(1067)

<400> 20

ggccggcc atg cag act ttc aca atg gtt cta gaa gaa atc tgg aca agt	50
Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser	
1 5 10	
ctt ttc atg tgg ttt ttc tac gca ttg att cca tgt ttg ctc aca gat	98
Leu Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp	
15 20 25 30	
gaa gtg gcc att ctg cct gcc cct cag aac ctc tct gta ctc tca acc	146
Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr	
35 40 45	
aac atg aag cat ctc ttg atg tgg agc cca gtg atc gcg cct gga gaa	194
Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu	
50 55 60	
aca gtg tac tat tct gtc gaa tac cag ggg gag tac gag agc ctg tac	242
Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr	
65 70 75	
acg agc cac atc tgg atc ccc agc agc tgg tgc tca ctc act gaa ggt	290
Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly	
80 85 90	
cct gag tgt gat gtc act gat gac atc acg gcc act gtg cca tac aac	338
Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn	
95 100 105 110	
ctt cgt gtc agg gcc aca ttg ggc tca cag acc tca gcc tgg agc atc	386
Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile	
115 120 125	
ctg aag cat ccc ttt aat aga aac tca acc atc ctt acc cga cct ggg	434
Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly	
130 135 140	
atg gag atc ccc aaa cat ggc ttc cac ctg gtt att gag ctg gag gac	482
Met Glu Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp	
145 150 155	

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ctg ggg ccc cag ttt gag ttc ctt gtg gcc tac tgg acg agg gag cct Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro 160 165 170	530
ggg gcc gag gaa cat gtc aaa atg gtg agg agt ggg ggt att cca gtg Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val 175 180 185 190	578
cac cta gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc cag His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln 195 200 205	626
aca ttc gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca gaa Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu 210 215 220	674
tgt gtg gag gtg caa gga gag gcc gga ggt ggt ggc agt gga ggc ggc Cys Val Glu Val Gln Gly Glu Ala Gly Gly Gly Ser Gly Gly Gly 225 230 235	722
ggg agc gga ggc ggt ggc agt cga act gtg gct gca cca tct gtc ttc Gly Ser Gly Gly Gly Ser Arg Thr Val Ala Ala Pro Ser Val Phe 240 245 250	770
atc ttc ccg cca tct gat gag cag ttg aaa tct gga act gcc tct gtt Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val 255 260 265 270	818
gtg tgc ctg ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp 275 280 285	866
aag gtg gat aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr 290 295 300	914
gag cag gac agc aag gac agc acc tac agc ctc agc agc acc ctg acg Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr 305 310 315	962
ctg agc aaa gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc	1010

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Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val
 320 325 330

acc cat cag ggc ctg agc tgc ccc gtc aca aag agc ttc aac agg gga 1058
 Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly
 335 340 345 350

gag tgt taa tctagaggcg cgcc 1081
 Glu Cys *

<210> 21

<211> 352

<212> PRT

<213> Homo sapiens

<400> 21

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
 1 5 10 15
 Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val
 20 25 30
 Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
 35 40 45
 Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
 50 55 60
 Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
 65 70 75 80
 His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
 85 90 95
 Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
 100 105 110
 Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
 115 120 125
 His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
 130 135 140
 Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
 145 150 155 160
 Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala
 165 170 175
 Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
 180 185 190
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205

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Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220
 Glu Val Gln Gly Glu Ala Gly Gly Gly Ser Gly Gly Gly Ser
 225 230 235 240
 Gly Gly Gly Gly Ser Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe
 245 250 255
 Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
 260 265 270
 Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
 275 280 285
 Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
 290 295 300
 Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
 305 310 315 320
 Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
 325 330 335
 Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 340 345 350

<210> 22

<211> 1801

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (8)...(1789)

<400> 22

gtcgacc atg gat gca atg aag aga ggg ctc tgc tgt gtg ctg ctg ctg 49
 Met Asp Ala Met Lys Arg Gly Leu Cys Cys Val Leu Leu Leu

1

5

10

tgt ggc gcc gtc ttc gtt tcg ctc agc cag gaa atc cat gcc gag ttg 97
 Cys Gly Ala Val Phe Val Ser Leu Ser Gln Glu Ile His Ala Glu Leu

15

20

25

30

aga cgc ttc cgt aga gtt ccc tgt gtc tct ggt ggt ttg cct aaa cct 145
 Arg Arg Phe Arg Arg Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro

35

40

45

gca aac atc acc ttc tta tcc atc aac atg aag aat gtc cta caa tgg 193

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Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp	
50 55 60	
act cca cca gag ggt ctt caa gga gtt aaa gtt act tac act gtg cag	241
Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln	
65 70 75	
tat ttc ata tat ggg caa aag aaa tgg ctg aat aaa tca gaa tgc aga	289
Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg	
80 85 90	
aat atc aat aga acc tac tgt gat ctt tct gct gaa act tct gac tac	337
Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr	
95 100 105 110	
gaa cac cag tat tat gcc aaa gtt aag gcc att tgg gga aca aag tgt	385
Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys	
115 120 125	
tcc aaa tgg gct gaa agt gga cgg ttc tat cct ttt tta gaa aca caa	433
Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln	
130 135 140	
att ggc cca cca gag gtg gca ctg act aca gat gag aag tcc att tct	481
Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser	
145 150 155	
gtt gtc ctg aca gct cca gag aag tgg aag aga aat cca gaa gac ctt	529
Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu	
160 165 170	
cct gtt tcc atg caa caa ata tac tcc aat ctg aag tat aac gtg tct	577
Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser	
175 180 185 190	
gtg ttg aat act aaa tca aac aga acg tgg tcc cag tgt gtg acc aac	625
Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn	
195 200 205	
cac acg ctg gtg ctc acc tgg ctg gag ccg aac act ctt tac tgc gta	673
His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val	
210 215 220	

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cac gtg gag tcc ttc gtc cca ggg ccc cct cgc cgt gct cag cct tct His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser 225 230 235	721
gag aag cag tgt gcc agg act ttg aaa gat caa ggt gga ggc ggt tca Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Gly Gly Gly Ser 240 245 250	769
ggc gga ggt ggc tct ggc ggt ggc gga tcg gcc tcc acc aag ggc cca Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Ser Thr Lys Gly Pro 255 260 265 270	817
tcg gtc ttc ccc ctg gca ccc tcc tcc aag agc acc tct ggg ggc aca Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr 275 280 285	865
gcg gcc ctg ggc tgc ctg gtc aag gac tac ttc ccc gaa ccg gtg acg Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr 290 295 300	913
gtg tcg tgg aac tca ggc gcc ctg acc agc ggc gtg cac acc ttc ccg Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro 305 310 315	961
gct gtc cta cag tcc tca gga ctc tac tcc ctc agc agc gtg gtg acc Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr 320 325 330	1009
gtg ccc tcc agc agc ttg ggc acc cag acc tac atc tgc aac gtg aat Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn 335 340 345 350	1057
cac aag ccc agc aac acc aag gtg gac aag aaa gtt gag ccc aaa tct His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser 355 360 365	1105
tgt gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa gcc gag Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu 370 375 380	1153
ggg gca ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac acc ctc Gly Ala Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu 385 390 395	1201

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atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac gtg agc Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser 400 405 410	1249
cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc gtg gag His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu 415 420 425 430	1297
gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac aac agc acg Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr 435 440 445	1345
tac cgt gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg aat Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn 450 455 460	1393
ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca tcc tcc Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser 465 470 475	1441
atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa cca cag Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln 480 485 490	1489
gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag aac cag gtc Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val 495 500 505 510	1537
agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc gcc gtg Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val 515 520 525	1585
gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc acg cct Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro 530 535 540	1633
ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc aag ctc acc Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr 545 550 555	1681
gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc tcc gtg	1729

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
560 565 570

atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc tcc ctg 1777
Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
575 580 585 590

tct ccg ggt aaa taatctagat ct 1801
Ser Pro Gly Lys

<210> 23

<211> 594

<212> PRT

<213> Homo sapiens

<400> 23

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20 25 30
Phe Arg Arg Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn
35 40 45
Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro
50 55 60
Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe
65 70 75 80
Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile
85 90 95
Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His
100 105 110
Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys
115 120 125
Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly
130 135 140
Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val
145 150 155 160
Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val
165 170 175
Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu
180 185 190
Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr
195 200 205

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Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val
 210 215 220
 Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys
 225 230 235 240
 Gln Cys Ala Arg Thr Leu Lys Asp Gln Gly Gly Gly Gly Ser Gly Gly
 245 250 255
 Gly Gly Ser Gly Gly Gly Ser Ala Ser Thr Lys Gly Pro Ser Val
 260 265 270
 Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
 275 280 285
 Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
 290 295 300
 Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
 305 310 315 320
 Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
 325 330 335
 Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
 340 345 350
 Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
 355 360 365
 Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala
 370 375 380
 Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 385 390 395 400
 Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
 405 410 415
 Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 420 425 430
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
 435 440 445
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 450 455 460
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser Ile Glu
 465 470 475 480
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 485 490 495
 Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 500 505 510
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 515 520 525
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 530 535 540

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Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 545 550 555 560
 Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 565 570 575
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 580 585 590
 Gly Lys

<210> 24

<211> 29

<212> DNA

<213> Homo sapiens

<400> 24

ggccggccat gcagactttc acaatggtt

29

<210> 25

<211> 52

<212> DNA

<213> homo sapiens

<400> 25

tccgctaccg ccgcctccac tgccaccacc tccggcctct cettgcacct cc

52

<210> 26

<211> 53

<212> DNA

<213> Homo sapiens

<400> 26

gtggaggcgg cggtagcggg ggcggtggca gtcgaactgt ggctgcacca tct

53

<210> 27

<211> 38

<212> DNA

<213> Homo sapiens

<400> 27

ggcgcgctc tagattaaca ctctcccctg ttgaagct

38

<210> 28

<211> 30

<212> DNA

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<213> Homo sapiens	
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<210> 29	
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<212> DNA	
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<400> 30	
cttcgtaga gttccctgtg tctctggtgg ttt	33
<210> 31	
<211> 53	
<212> DNA	
<213> Homo sapiens	
<400> 31	
gccagagcca cctccgctg aaccgctcc accttgatct ttcaaagtcc tgg	53
<210> 32	
<211> 51	
<212> DNA	
<213> Homo sapiens	
<400> 32	
caggcggagg tggctctggc ggtggcgat cggcctccac caagggccca t	51
<210> 33	
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<213> Homo sapiens	
<400> 33	

ctgggcacgg tgggcattg	20
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cacatgccca ccgtgccag	20
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<213> Homo sapiens	
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agatctagat tatttaccg gagacagga g	31
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Met His Thr Pro Gly Thr	
1 5	
ccg gcg ccg ggc cac ccg gac ccg ccg cca ctg ttg ctg ctc acg ctg	103
Pro Ala Pro Gly His Pro Asp Pro Pro Leu Leu Leu Thr Leu	
10 15 20	
ctt ctg ctg ctg gcc gct tcg gga cgc gca gtt cct tgt gtc ttc tgt	151
Leu Leu Leu Leu Ala Ala Ser Gly Arg Ala Val Pro Cys Val Phe Cys	
25 30 35	
ggt ttg cct aaa cct aca aat atc acc ttc tta tcc atc aac atg aag	199
Gly Leu Pro Lys Pro Thr Asn Ile Thr Phe Leu Ser Ile Asn Met Lys	
40 45 50	

aat gtc ctg cat tgg aat cca cca gag agt cta cac gga gtt gaa gtc Asn Val Leu His Trp Asn Pro Pro Glu Ser Leu His Gly Val Glu Val 55 60 65 70	247
aca tac act gtg caa tat ttc ata tat ggg cag aag aaa tgg ctg aat Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn 75 80 85	295
gcc tct aaa tgc ggg agt atc aac agg acc tac tgt gac ctt tct gtt Ala Ser Lys Cys Gly Ser Ile Asn Arg Thr Tyr Cys Asp Leu Ser Val 90 95 100	343
gag acc tca gac tat gaa cac cag ttc tat gcc aaa gtg aag gcc att Glu Thr Ser Asp Tyr Glu His Gln Phe Tyr Ala Lys Val Lys Ala Ile 105 110 115	391
tgg gaa gcc agg tgc tcc gaa tgg gcc gag acg gaa cgc ttc tat cct Trp Glu Ala Arg Cys Ser Glu Trp Ala Glu Thr Glu Arg Phe Tyr Pro 120 125 130	439
ttc ttg gaa act caa gtc agc cca cca gag att gcc ctg aca act ggc Phe Leu Glu Thr Gln Val Ser Pro Pro Glu Ile Ala Leu Thr Thr Gly 135 140 145 150	487
gag aag tcc atc tct att gcc ctg aca gca cca gag aag tgg aaa aga Glu Lys Ser Ile Ser Ile Ala Leu Thr Ala Pro Glu Lys Trp Lys Arg 155 160 165	535
aat cca caa gac cac act gtt tct atg caa cag ata tac ccc aat ttg Asn Pro Gln Asp His Thr Val Ser Met Gln Gln Ile Tyr Pro Asn Leu 170 175 180	583
aag tac aat gtg tct gtg tat aac act aag tcg aga aga acg tgg tcc Lys Tyr Asn Val Ser Val Tyr Asn Thr Lys Ser Arg Arg Thr Trp Ser 185 190 195	631
cag tgt gtc acc aac agc aca ctg gtc ctc agc tgg ctg gag ccc aac Gln Cys Val Thr Asn Ser Thr Leu Val Leu Ser Trp Leu Glu Pro Asn 200 205 210	679
act ctg tat tgt gtc cac gtg gag tcc ctt gtc cca ggg ccc cct cgc	727

Thr	Leu	Tyr	Cys	Val	His	Val	Glu	Ser	Leu	Val	Pro	Gly	Pro	Pro	Arg	
215					220					225					230	
ctc	ccg	atg	cct	tct	cag	aag	cag	tg	atc	agt	act	ttg	gaa	gtt	caa	775
Leu	Pro	Met	Pro	Ser	Gln	Lys	Gln	Cys	Ile	Ser	Thr	Leu	Glu	Val	Gln	
				235				240					245			
aca	tca	gca	tgg	aag	gct	aaa	gtc	atc	ttc	tgg	tat	gtc	ttc	ctc	aca	823
Thr	Ser	Ala	Trp	Lys	Ala	Lys	Val	Ile	Phe	Trp	Tyr	Val	Phe	Leu	Thr	
			250					255					260			
tct	gtt	atc	gtg	ttt	ctt	ttc	tcc	gca	att	ggc	tac	ttg	gtt	tac	cgt	871
Ser	Val	Ile	Val	Phe	Leu	Phe	Ser	Ala	Ile	Gly	Tyr	Leu	Val	Tyr	Arg	
		265					270					275				
tac	atc	cat	gtt	ggc	aag	gaa	aaa	cac	cca	gca	aat	ttg	gta	ctg	att	919
Tyr	Ile	His	Val	Gly	Lys	Glu	Lys	His	Pro	Ala	Asn	Leu	Val	Leu	Ile	
	280					285					290					
tat	aga	aat	gaa	att	ggc	aca	aga	gtc	ttt	gaa	cct	act	gaa	aca	atc	967
Tyr	Arg	Asn	Glu	Ile	Gly	Thr	Arg	Val	Phe	Glu	Pro	Thr	Glu	Thr	Ile	
295				300					305					310		
aca	ctt	aat	ttt	atc	acc	ttc	agt	atg	ttg	gat	gat	act	aaa	att	tct	1015
Thr	Leu	Asn	Phe	Ile	Thr	Phe	Ser	Met	Leu	Asp	Asp	Thr	Lys	Ile	Ser	
			315					320					325			
cca	aag	gat	atg	aat	tta	ctg	gac	aaa	agc	agt	gat	gac	atc	agt	gtt	1063
Pro	Lys	Asp	Met	Asn	Leu	Leu	Asp	Lys	Ser	Ser	Asp	Asp	Ile	Ser	Val	
		330					335					340				
aat	gac	cct	gag	cac	aat	gag	gcc	tgg	gag	ccg	cac	tgg	gag	gag	gtg	1111
Asn	Asp	Pro	Glu	His	Asn	Glu	Ala	Trp	Glu	Pro	His	Trp	Glu	Glu	Val	
		345				350					355					
gag	ggg	caa	cat	tta	gga	tg	tct	tcg	cat	ttg	atg	gac	gct	gtc	tgt	1159
Glu	Gly	Gln	His	Leu	Gly	Cys	Ser	Ser	His	Leu	Met	Asp	Ala	Val	Cys	
	360				365					370						
ggt	gct	gag	caa	aga	gac	gga	gac	acc	tcc	cta	acc	cag	cat	ggg	tgg	1207
Gly	Ala	Glu	Gln	Arg	Asp	Gly	Asp	Thr	Ser	Leu	Thr	Gln	His	Gly	Trp	
375				380				385						390		

ctt aac agc acc atc ccc aca gga gag aca gac act gag cct caa tac	1255
Leu Asn Ser Thr Ile Pro Thr Gly Glu Thr Asp Thr Glu Pro Gln Tyr	
395 400 405	
aaa gtc cta agt gac ttc tac ggg gag ggt gaa atc caa ctg tcc tgt	1303
Lys Val Leu Ser Asp Phe Tyr Gly Glu Gly Glu Ile Gln Leu Ser Cys	
410 415 420	
gag ccg gaa gag gcg gcc aga aca gag aaa ata tct gag cca ctg gtg	1351
Glu Pro Glu Glu Ala Ala Arg Thr Glu Lys Ile Ser Glu Pro Leu Val	
425 430 435	
act tca gca aac ttg gac cca cag ctt gaa gac cta cat cac ctg ggt	1399
Thr Ser Ala Asn Leu Asp Pro Gln Leu Glu Asp Leu His His Leu Gly	
440 445 450	
cag gag cat act gtc tcc gag gat ggg cca gag gaa gag aca tct ata	1447
Gln Glu His Thr Val Ser Glu Asp Gly Pro Glu Glu Glu Thr Ser Ile	
455 460 465 470	
aca gta gtg gat tgg gac cct caa act ggc agg ctg tgt atc cct tcc	1495
Thr Val Val Asp Trp Asp Pro Gln Thr Gly Arg Leu Cys Ile Pro Ser	
475 480 485	
tta cct atc ttt ggc cgt gat cct gag aac tat ggt cat tat gag aga	1543
Leu Pro Ile Phe Gly Arg Asp Pro Glu Asn Tyr Gly His Tyr Glu Arg	
490 495 500	
gac cag ctc tta gag ggt ggc ctt ttg tct aga ctc tat gag aac cag	1591
Asp Gln Leu Leu Glu Gly Gly Leu Leu Ser Arg Leu Tyr Glu Asn Gln	
505 510 515	
gca cct gac aag cca gag aaa gaa aat gaa aac tgt ctc aca cgg ttt	1639
Ala Pro Asp Lys Pro Glu Lys Glu Asn Glu Asn Cys Leu Thr Arg Phe	
520 525 530	
atg gag gaa tgg ggg tta cat gta caa atg gaa agc tagtgccagg	1685
Met Glu Glu Trp Gly Leu His Val Gln Met Glu Ser	
535 540 545	
ctttctgttg actgccaaca aatgaaggaa ccatcccagg gggatgaacag tgttcaggtt	1745
atcagtgta gcaatgagac tgttctctct gttcatgaac ttgtgcagcc ctgcctcatc	1805
c	1806

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<210> 37
 <211> 546
 <212> PRT
 <213> Mus musculus

<400> 37

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			20					25				30			
Val	Pro	Cys	Val	Phe	Cys	Gly	Leu	Pro	Lys	Pro	Thr	Asn	Ile	Thr	Phe
		35					40					45			
Leu	Ser	Ile	Asn	Met	Lys	Asn	Val	Leu	His	Trp	Asn	Pro	Pro	Glu	Ser
	50					55					60				
Leu	His	Gly	Val	Glu	Val	Thr	Tyr	Thr	Val	Gln	Tyr	Phe	Ile	Tyr	Gly
	65				70					75				80	
Gln	Lys	Lys	Trp	Leu	Asn	Ala	Ser	Lys	Cys	Gly	Ser	Ile	Asn	Arg	Thr
			85						90					95	
Tyr	Cys	Asp	Leu	Ser	Val	Glu	Thr	Ser	Asp	Tyr	Glu	His	Gln	Phe	Tyr
			100					105					110		
Ala	Lys	Val	Lys	Ala	Ile	Trp	Glu	Ala	Arg	Cys	Ser	Glu	Trp	Ala	Glu
		115					120					125			
Thr	Glu	Arg	Phe	Tyr	Pro	Phe	Leu	Glu	Thr	Gln	Val	Ser	Pro	Pro	Glu
	130					135					140				
Ile	Ala	Leu	Thr	Thr	Gly	Glu	Lys	Ser	Ile	Ser	Ile	Ala	Leu	Thr	Ala
	145					150				155				160	
Pro	Glu	Lys	Trp	Lys	Arg	Asn	Pro	Gln	Asp	His	Thr	Val	Ser	Met	Gln
			165						170					175	
Gln	Ile	Tyr	Pro	Asn	Leu	Lys	Tyr	Asn	Val	Ser	Val	Tyr	Asn	Thr	Lys
			180					185					190		
Ser	Arg	Arg	Thr	Trp	Ser	Gln	Cys	Val	Thr	Asn	Ser	Thr	Leu	Val	Leu
		195					200					205			
Ser	Trp	Leu	Glu	Pro	Asn	Thr	Leu	Tyr	Cys	Val	His	Val	Glu	Ser	Leu
	210					215					220				
Val	Pro	Gly	Pro	Pro	Arg	Leu	Pro	Met	Pro	Ser	Gln	Lys	Gln	Cys	Ile
	225				230					235				240	
Ser	Thr	Leu	Glu	Val	Gln	Thr	Ser	Ala	Trp	Lys	Ala	Lys	Val	Ile	Phe
			245						250					255	
Trp	Tyr	Val	Phe	Leu	Thr	Ser	Val	Ile	Val	Phe	Leu	Phe	Ser	Ala	Ile
		260						265					270		
Gly	Tyr	Leu	Val	Tyr	Arg	Tyr	Ile	His	Val	Gly	Lys	Glu	Lys	His	Pro
	275						280						285		

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Ala Asn Leu Val Leu Ile Tyr Arg Asn Glu Ile Gly Thr Arg Val Phe
 290 295 300
 Glu Pro Thr Glu Thr Ile Thr Leu Asn Phe Ile Thr Phe Ser Met Leu
 305 310 315 320
 Asp Asp Thr Lys Ile Ser Pro Lys Asp Met Asn Leu Leu Asp Lys Ser
 325 330 335
 Ser Asp Asp Ile Ser Val Asn Asp Pro Glu His Asn Glu Ala Trp Glu
 340 345 350
 Pro His Trp Glu Glu Val Glu Gly Gln His Leu Gly Cys Ser Ser His
 355 360 365
 Leu Met Asp Ala Val Cys Gly Ala Glu Gln Arg Asp Gly Asp Thr Ser
 370 375 380
 Leu Thr Gln His Gly Trp Leu Asn Ser Thr Ile Pro Thr Gly Glu Thr
 385 390 395 400
 Asp Thr Glu Pro Gln Tyr Lys Val Leu Ser Asp Phe Tyr Gly Glu Gly
 405 410 415
 Glu Ile Gln Leu Ser Cys Glu Pro Glu Glu Ala Ala Arg Thr Glu Lys
 420 425 430
 Ile Ser Glu Pro Leu Val Thr Ser Ala Asn Leu Asp Pro Gln Leu Glu
 435 440 445
 Asp Leu His His Leu Gly Gln Glu His Thr Val Ser Glu Asp Gly Pro
 450 455 460
 Glu Glu Glu Thr Ser Ile Thr Val Val Asp Trp Asp Pro Gln Thr Gly
 465 470 475 480
 Arg Leu Cys Ile Pro Ser Leu Pro Ile Phe Gly Arg Asp Pro Glu Asn
 485 490 495
 Tyr Gly His Tyr Glu Arg Asp Gln Leu Leu Glu Gly Gly Leu Leu Ser
 500 505 510
 Arg Leu Tyr Glu Asn Gln Ala Pro Asp Lys Pro Glu Lys Glu Asn Glu
 515 520 525
 Asn Cys Leu Thr Arg Phe Met Glu Glu Trp Gly Leu His Val Gln Met
 530 535 540
 Glu Ser
 545

<210> 38

<211> 217

<212> PRT

<213> Mus musculus

<400> 38

Val Pro Cys Val Phe Cys Gly Leu Pro Lys Pro Thr Asn Ile Thr Phe
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Leu Ser Ile Asn Met Lys Asn Val Leu His Trp Asn Pro Pro Glu Ser
 20 25 30
 Leu His Gly Val Glu Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Ala Ser Lys Cys Gly Ser Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Val Glu Thr Ser Asp Tyr Glu His Gln Phe Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Glu Ala Arg Cys Ser Glu Trp Ala Glu
 85 90 95
 Thr Glu Arg Phe Tyr Pro Phe Leu Glu Thr Gln Val Ser Pro Glu
 100 105 110
 Ile Ala Leu Thr Thr Gly Glu Lys Ser Ile Ser Ile Ala Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Gln Asp His Thr Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Pro Asn Leu Lys Tyr Asn Val Ser Val Tyr Asn Thr Lys
 145 150 155 160
 Ser Arg Arg Thr Trp Ser Gln Cys Val Thr Asn Ser Thr Leu Val Leu
 165 170 175
 Ser Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Leu
 180 185 190
 Val Pro Gly Pro Pro Arg Leu Pro Met Pro Ser Gln Lys Gln Cys Ile
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<210> 39

<211> 514

<212> PRT

<213> Mus musculus

<400> 39

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 Leu His Gly Val Glu Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Ala Ser Lys Cys Gly Ser Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Val Glu Thr Ser Asp Tyr Glu His Gln Phe Tyr
 65 70 75 80

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Asp Leu His His Leu Gly Gln Glu His Thr Val Ser Glu Asp Gly Pro
 420 425 430
 Glu Glu Glu Thr Ser Ile Thr Val Val Asp Trp Asp Pro Gln Thr Gly
 435 440 445
 Arg Leu Cys Ile Pro Ser Leu Pro Ile Phe Gly Arg Asp Pro Glu Asn
 450 455 460
 Tyr Gly His Tyr Glu Arg Asp Gln Leu Leu Glu Gly Gly Leu Leu Ser
 465 470 475 480
 Arg Leu Tyr Glu Asn Gln Ala Pro Asp Lys Pro Glu Lys Glu Asn Glu
 485 490 495
 Asn Cys Leu Thr Arg Phe Met Glu Glu Trp Gly Leu His Val Gln Met
 500 505 510
 Glu Ser

<210> 40
 <211> 18
 <212> DNA
 <213> Mus musculus

<400> 40
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18

<210> 41
 <211> 24
 <212> DNA
 <213> Mus musculus

<400> 41
 ggatgaggca gggctgacaa agtt

24

<210> 42
 <211> 36
 <212> DNA
 <213> Homo sapiens

<400> 42
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36

<210> 43
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09745792.12200

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aattgaga	8
<210> 45	
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cgcgtctc	8
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<400> 46	
gtcacttgaa ttcggtaccg cctctgttgt gtgcctg	37
<210> 47	
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<211> 38	
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<400> 48	
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<210> 49
 <211> 35
 <212> DNA
 <213> Homo sapiens

<400> 49
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<210> 50
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 <212> DNA
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<400> 50
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<210> 51
 <211> 86
 <212> DNA
 <213> Homo sapiens

<400> 51
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 gccacagtgg cctctccttg cacctc 86

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<220>
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 <222> (1)...(1713)

<400> 52
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 Met Arg Ala Pro Gly Arg Pro Ala Leu Arg Pro Leu Leu Leu Leu
 1 5 10 15

ctg gcg gcg cct tgg gga cgg gca gtt ccc tgt gtc tct ggt ggt ttg 96
 Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys Val Ser Gly Gly Leu
 20 25 30

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cct aaa cct gca aac atc acc ttc tta tcc atc aac atg aag aat gtc Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val 35 40 45	144
cta caa tgg act cca cca gag ggt ctt caa gga gtt aaa gtt act tac Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr 50 55 60	192
act gtg cag tat ttc ata tat ggg caa aag aaa tgg ctg aat aaa tca Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser 65 70 75 80	240
gaa tgc aga aat atc aat aga acc tac tgt gat ctt tct gct gaa act Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr 85 90 95	288
tct gac tac gaa cac cag tat tat gcc aaa gtt aag gcc att tgg gga Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly 100 105 110	336
aca aag tgt tcc aaa tgg gct gaa agt gga cgg ttc tat cct ttt tta Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu 115 120 125	384
gaa aca caa att ggc cca cca gag gtg gca ctg act aca gat gag aag Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys 130 135 140	432
tcc att tct gtt gtc ctg aca gct cca gag aag tgg aag aga aat cca Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro 145 150 155 160	480
gaa gac ctt cct gtt tcc atg caa caa ata tac tcc aat ctg aag tat Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr 165 170 175	528
aac gtg tct gtg ttg aat act aaa tca aac aga acg tgg tcc cag tgt Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys 180 185 190	576
gtg acc aac cac acg ctg gtg ctc acc tgg ctg gag ccg aac act ctt Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu 195 200 205	624

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tac tgc gta cac gtg gag tcc ttc gtc cca ggg ccc cct cgc cgt gct Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala 210 215 220	672
cag cct tct gag aag cag tgt gcc agg act ttg aaa gat caa tca tca Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser 225 230 235 240	720
gag gct agc acc aag ggc cca tcg gtc ttc ccc ctg gca ccc tcc tcc Glu Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser 245 250 255	768
aag agc acc tct ggg ggc aca gcg gcc ctg ggc tgc ctg gtc aag gac Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp 260 265 270	816
tac ttc ccc gaa ccg gtg acg gtg tcg tgg aac tca ggc gcc ctg acc Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr 275 280 285	864
agc ggc gtg cac acc ttc ccg gct gtc cta cag tcc tca gga ctc tac Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr 290 295 300	912
tcc ctc agc agc gtg gtg acc gtg ccc tcc agc agc ttg ggc acc cag Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln 305 310 315 320	960
acc tac atc tgc aac gtg aat cac aag ccc agc aac acc aag gtg gac Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Asp 325 330 335	1008
aag aaa gtt gag ccc aaa tct tgt gac aaa act cac aca tgc cca ccg Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro 340 345 350	1056
tgc cca gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro 355 360 365	1104
cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc aca	1152

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Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr		
	370					375					380						
tgc	gtg	gtg	gtg	gac	gtg	agc	cac	gaa	gac	cct	gag	gtc	aag	ttc	aac	1200	
Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn		
385					390					395				400			
tgg	tac	gtg	gac	ggc	gtg	gag	gtg	cat	aat	gcc	aag	aca	aag	ccg	cgg	1248	
Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg		
				405					410					415			
gag	gag	cag	tac	aac	agc	acg	tac	cgt	gtg	gtc	agc	gtc	ctc	acc	gtc	1296	
Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val		
			420					425					430				
ctg	cac	cag	gac	tgg	ctg	aat	ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	1344	
Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser		
			435				440					445					
aac	aaa	gcc	ctc	cca	gcc	ccc	atc	gag	aaa	acc	atc	tcc	aaa	gcc	aaa	1392	
Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys		
		450					455					460					
ggg	cag	ccc	cga	gaa	cca	cag	gtg	tac	acc	ctg	ccc	cca	tcc	cgg	gat	1440	
Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp		
465					470					475				480			
gag	ctg	acc	aag	aac	cag	gtc	agc	ctg	acc	tgc	ctg	gtc	aaa	ggc	ttc	1488	
Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe		
				485					490					495			
tat	ccc	agc	gac	atc	gcc	gtg	gag	tgg	gag	agc	aat	ggg	cag	ccg	gag	1536	
Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu		
			500						505				510				
aac	aac	tac	aag	acc	acg	cct	ccc	gtg	ctg	gac	tcc	gac	ggc	tcc	ttc	1584	
Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe		
			515				520					525					
ttc	ctc	tac	agc	aag	ctc	acc	gtg	gac	aag	agc	agg	tgg	cag	cag	ggg	1632	
Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly		
			530				535					540					

002224.2625763

aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac tac 1680
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 545 550 555 560

acg cag aag agc ctc tcc ctg tct ccg ggt aaa tgacgcg 1720
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 565 570

<210> 53

<211> 571

<212> PRT

<213> Homo sapiens

<400> 53

Met Arg Ala Pro Gly Arg Pro Ala Leu Arg Pro Leu Leu Leu Leu
 1 5 10 15
 Leu Ala Ala Pro Trp Gly Arg Ala Val Pro Cys Val Ser Gly Gly Leu
 20 25 30
 Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn Val
 35 40 45
 Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr Tyr
 50 55 60
 Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys Ser
 65 70 75 80
 Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr
 85 90 95
 Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly
 100 105 110
 Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu
 115 120 125
 Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys
 130 135 140
 Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro
 145 150 155 160
 Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr
 165 170 175
 Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys
 180 185 190
 Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu
 195 200 205
 Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala
 210 215 220

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Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser
 225 230 235 240
 Glu Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser
 245 250 255
 Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 260 265 270
 Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 275 280 285
 Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
 290 295 300
 Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln
 305 310 315 320
 Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp
 325 330 335
 Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
 340 345 350
 Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 355 360 365
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 370 375 380
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 385 390 395 400
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 405 410 415
 Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 420 425 430
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 435 440 445
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 450 455 460
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 465 470 475 480
 Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 485 490 495
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 500 505 510
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 515 520 525
 Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 530 535 540
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 545 550 555 560

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Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
565 570

<210> 54

<211> 547

<212> PRT

<213> Homo sapiens

<400> 54

Val	Pro	Cys	Val	Ser	Gly	Gly	Leu	Pro	Lys	Pro	Ala	Asn	Ile	Thr	Phe
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Leu	Ser	Ile	Asn	Met	Lys	Asn	Val	Leu	Gln	Trp	Thr	Pro	Pro	Glu	Gly
			20					25				30			
Leu	Gln	Gly	Val	Lys	Val	Thr	Tyr	Thr	Val	Gln	Tyr	Phe	Ile	Tyr	Gly
		35					40					45			
Gln	Lys	Lys	Trp	Leu	Asn	Lys	Ser	Glu	Cys	Arg	Asn	Ile	Asn	Arg	Thr
		50				55					60				
Tyr	Cys	Asp	Leu	Ser	Ala	Glu	Thr	Ser	Asp	Tyr	Glu	His	Gln	Tyr	Tyr
65					70					75				80	
Ala	Lys	Val	Lys	Ala	Ile	Trp	Gly	Thr	Lys	Cys	Ser	Lys	Trp	Ala	Glu
				85					90				95		
Ser	Gly	Arg	Phe	Tyr	Pro	Phe	Leu	Glu	Thr	Gln	Ile	Gly	Pro	Pro	Glu
			100				105					110			
Val	Ala	Leu	Thr	Thr	Asp	Glu	Lys	Ser	Ile	Ser	Val	Val	Leu	Thr	Ala
		115				120						125			
Pro	Glu	Lys	Trp	Lys	Arg	Asn	Pro	Glu	Asp	Leu	Pro	Val	Ser	Met	Gln
		130				135				140					
Gln	Ile	Tyr	Ser	Asn	Leu	Lys	Tyr	Asn	Val	Ser	Val	Leu	Asn	Thr	Lys
145					150					155				160	
Ser	Asn	Arg	Thr	Trp	Ser	Gln	Cys	Val	Thr	Asn	His	Thr	Leu	Val	Leu
				165					170				175		
Thr	Trp	Leu	Glu	Pro	Asn	Thr	Leu	Tyr	Cys	Val	His	Val	Glu	Ser	Phe
		180					185					190			
Val	Pro	Gly	Pro	Pro	Arg	Arg	Ala	Gln	Pro	Ser	Glu	Lys	Gln	Cys	Ala
		195				200						205			
Arg	Thr	Leu	Lys	Asp	Gln	Ser	Ser	Glu	Ala	Ser	Thr	Lys	Gly	Pro	Ser
		210				215					220				
Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala
225				230						235				240	
Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val
			245						250				255		
Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala
			260				265						270		

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Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
 275 280 285
 Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
 290 295 300
 Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
 305 310 315 320
 Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 325 330 335
 Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 340 345 350
 Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 355 360 365
 Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 370 375 380
 His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 385 390 395 400
 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 405 410 415
 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 420 425 430
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 435 440 445
 Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
 450 455 460
 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 465 470 475 480
 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 485 490 495
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 500 505 510
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 515 520 525
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 530 535 540
 Pro Gly Lys
 545

<210> 55

<211> 217

<212> PRT

<213> Homo sapiens

<400> 55

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Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
 1 5 10 15
 Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160
 Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln Ser Ser Glu
 210 215

<210> 56

<211> 1011

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)...(1008)

<400> 56

atg cag act ttc aca atg gtt cta gaa gaa atc tgg aca agt ctt ttc
 Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
 1 5 10 15

48

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atg tgg ttt ttc tac gca ttg att cca tgt ttg ctc aca gat gaa gtg Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val 20 25 30	96
gcc att ctg cct gcc cct cag aac ctc tct gta ctc tca acc aac atg Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met 35 40 45	144
aag cat ctc ttg atg tgg agc cca gtg atc gcg cct gga gaa aca gtg Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val 50 55 60	192
tac tat tct gtc gaa tac cag ggg gag tac gag agc ctg tac acg agc Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser 65 70 75 80	240
cac atc tgg atc ccc agc agc tgg tgc tca ctc act gaa ggt cct gag His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu 85 90 95	288
tgt gat gtc act gat gac atc acg gcc act gtg cca tac aac ctt cgt Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg 100 105 110	336
gtc agg gcc aca ttg ggc tca cag acc tca gcc tgg agc atc ctg aag Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys 115 120 125	384
cat ccc ttt aat aga aac tca acc atc ctt acc cga cct ggg atg gag His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu 130 135 140	432
atc acc aaa gat ggc ttc cac ctg gtt att gag ctg gag gac ctg ggg Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly 145 150 155 160	480
ccc cag ttt gag ttc ctt gtg gcc tac tgg agg agg gag cct ggt gcc Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala 165 170 175	528
gag gaa cat gtc aaa atg gtg agg agt ggg ggt att cca gtg cac cta Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu 180 185 190	576

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gaa acc atg gag cca ggg gct gca tac tgt gtg aag gcc cag aca ttc 624
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205

gtg aag gcc att ggg agg tac agc gcc ttc agc cag aca gaa tgt gtg 672
 Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220

gag gtg caa gga gag gcc act gtg gct gca cca tct gtc ttc atc ttc 720
 Glu Val Gln Gly Glu Ala Thr Val Ala Ala Pro Ser Val Phe Ile Phe
 225 230 235

ccg cca tct gat gag cag ttg aaa tct ggt acc gcc tct gtt gtg tgc 768
 Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
 245 250 255

ctg ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg aag gtg 816
 Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
 260 265 270

gat aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag 864
 Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
 275 280 285

gac agc aag gac agc acc tac agc ctc agc agc acc ctg acg ctg agc 912
 Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
 290 295 300

aaa gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat 960
 Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
 305 310 315 320

cag ggc ctg agc tcg ccc gtc aca aag agc ttc aac agg gga gag tgt 1008
 Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 325 330 335

tag 1011

<210> 57
 <211> 336
 <212> PRT
 <213> Homo sapiens

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<400> 57

Met Gln Thr Phe Thr Met Val Leu Glu Glu Ile Trp Thr Ser Leu Phe
 1 5 10 15
 Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp Glu Val
 20 25 30
 Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met
 35 40 45
 Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val
 50 55 60
 Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser
 65 70 75 80
 His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu
 85 90 95
 Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg
 100 105 110
 Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys
 115 120 125
 His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu
 130 135 140
 Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly
 145 150 155 160
 Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala
 165 170 175
 Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu
 180 185 190
 Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe
 195 200 205
 Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val
 210 215 220
 Glu Val Gln Gly Glu Ala Thr Val Ala Ala Pro Ser Val Phe Ile Phe
 225 230 235 240
 Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
 245 250 255
 Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
 260 265 270
 Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
 275 280 285
 Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
 290 295 300
 Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
 305 310 315 320

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Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 325 330 335

<210> 58

<211> 307

<212> PRT

<213> Homo sapiens

<400> 58

Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
 1 5 10 15
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
 20 25 30
 Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
 35 40 45
 Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
 50 55 60
 Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
 65 70 75 80
 Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
 85 90 95
 Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
 100 105 110
 Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu
 115 120 125
 Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu
 130 135 140
 Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
 145 150 155 160
 Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
 165 170 175
 Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
 180 185 190
 Glu Cys Val Glu Val Gln Gly Glu Ala Thr Val Ala Ala Pro Ser Val
 195 200 205
 Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser
 210 215 220
 Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln
 225 230 235 240
 Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val
 245 250 255
 Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu
 260 265 270

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Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu
 275 280 285
 Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg
 290 295 300
 Gly Glu Cys
 305

<210> 59
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 59
 Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
 1 5 10 15
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
 20 25 30
 Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
 35 40 45
 Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
 50 55 60
 Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
 65 70 75 80
 Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
 85 90 95
 Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
 100 105 110
 Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu
 115 120 125
 Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu
 130 135 140
 Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
 145 150 155 160
 Val His Leu Glu Thr Met Glu Pro Gly Ala Tyr Cys Val Lys Ala
 165 170 175
 Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
 180 185 190
 Glu Cys Val Glu Val Gln Gly Glu Ala
 195 200

<210> 60
 <211> 323
 <212> PRT

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<213> Homo sapiens

<400> 60

Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
 1 5 10 15
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
 20 25 30
 Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
 35 40 45
 Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
 50 55 60
 Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
 65 70 75 80
 Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
 85 90 95
 Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
 100 105 110
 Gly Met Glu Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu
 115 120 125
 Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu
 130 135 140
 Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
 145 150 155 160
 Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
 165 170 175
 Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
 180 185 190
 Glu Cys Val Glu Val Gln Gly Glu Ala Gly Gly Gly Gly Ser Gly Gly
 195 200 205
 Gly Gly Ser Gly Gly Gly Ser Arg Thr Val Ala Ala Pro Ser Val
 210 215 220
 Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser
 225 230 235 240
 Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln
 245 250 255
 Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val
 260 265 270
 Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu
 275 280 285
 Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu
 290 295 300
 Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg
 305 310 315 320

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Gly Glu Cys

<210> 61

<211> 201

<212> PRT

<213> Homo sapiens

<400> 61

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Asp Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
 1          5          10          15
Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly
          20          25          30
Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu
          35          40          45
Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu
          50          55          60
Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr
          65          70          75          80
Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser
          85          90          95
Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro
          100          105          110
Gly Met Glu Ile Pro Lys His Gly Phe His Leu Val Ile Glu Leu Glu
          115          120          125
Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu
          130          135          140
Pro Gly Ala Glu Glu His Val Lys Met Val Arg Ser Gly Gly Ile Pro
          145          150          155          160
Val His Leu Glu Thr Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala
          165          170          175
Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr
          180          185          190
Glu Cys Val Glu Val Gln Gly Glu Ala
          195          200

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<210> 62

<211> 559

<212> PRT

<213> Homo sapiens

<400> 62

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Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
 1          5          10          15

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Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80
 Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160
 Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln Gly Gly Gly Ser Gly Gly Gly Ser
 210 215 220
 Gly Gly Gly Gly Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 225 230 235 240
 Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
 245 250 255
 Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 260 265 270
 Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 275 280 285
 Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 290 295 300
 Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
 305 310 315 320
 Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
 325 330 335
 Thr Cys Pro Pro Cys Pro Ala Pro Glu Ala Glu Gly Ala Pro Ser Val
 340 345 350

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Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
 355 360 365
 Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
 370 375 380
 Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
 385 390 395 400
 Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
 405 410 415
 Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
 420 425 430
 Cys Lys Val Ser Asn Lys Ala Leu Pro Ser Ser Ile Glu Lys Thr Ile
 435 440 445
 Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
 450 455 460
 Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
 465 470 475 480
 Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
 485 490 495
 Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
 500 505 510
 Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
 515 520 525
 Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
 530 535 540
 His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 545 550 555

<210> 63

<211> 214

<212> PRT

<213> Homo sapiens

<400> 63

Val Pro Cys Val Ser Gly Gly Leu Pro Lys Pro Ala Asn Ile Thr Phe
 1 5 10 15
 Leu Ser Ile Asn Met Lys Asn Val Leu Gln Trp Thr Pro Pro Glu Gly
 20 25 30
 Leu Gln Gly Val Lys Val Thr Tyr Thr Val Gln Tyr Phe Ile Tyr Gly
 35 40 45
 Gln Lys Lys Trp Leu Asn Lys Ser Glu Cys Arg Asn Ile Asn Arg Thr
 50 55 60
 Tyr Cys Asp Leu Ser Ala Glu Thr Ser Asp Tyr Glu His Gln Tyr Tyr
 65 70 75 80

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Ala Lys Val Lys Ala Ile Trp Gly Thr Lys Cys Ser Lys Trp Ala Glu
 85 90 95
 Ser Gly Arg Phe Tyr Pro Phe Leu Glu Thr Gln Ile Gly Pro Pro Glu
 100 105 110
 Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr Ala
 115 120 125
 Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser Met Gln
 130 135 140
 Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu Asn Thr Lys
 145 150 155 160
 Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His Thr Leu Val Leu
 165 170 175
 Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val His Val Glu Ser Phe
 180 185 190
 Val Pro Gly Pro Pro Arg Arg Ala Gln Pro Ser Glu Lys Gln Cys Ala
 195 200 205
 Arg Thr Leu Lys Asp Gln
 210

<210> 64

<211> 19

<212> PRT

<213> Homo sapiens

<400> 64

Glu Glu Ile His Ala Glu Leu Arg Arg Phe Arg Arg Val Pro Cys Val
 1 5 10 15
 Ser Gly Gly

<210> 65

<211> 207

<212> PRT

<213> Homo sapiens

<400> 65

Leu Pro Lys Pro Ala Asn Ile Thr Phe Leu Ser Ile Asn Met Lys Asn
 1 5 10 15
 Val Leu Gln Trp Thr Pro Pro Glu Gly Leu Gln Gly Val Lys Val Thr
 20 25 30
 Tyr Thr Val Gln Tyr Phe Ile Tyr Gly Gln Lys Lys Trp Leu Asn Lys
 35 40 45
 Ser Glu Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu
 50 55 60

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Thr Ser Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp
 65 70 75 80
 Gly Thr Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe
 85 90 95
 Leu Glu Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu
 100 105 110
 Lys Ser Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn
 115 120 125
 Pro Glu Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys
 130 135 140
 Tyr Asn Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln
 145 150 155 160
 Cys Val Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr
 165 170 175
 Leu Tyr Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg
 180 185 190
 Ala Gln Pro Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln
 195 200 205

<210> 66

<211> 150

<212> PRT

<213> Homo sapiens

<400> 66

Cys Arg Asn Ile Asn Arg Thr Tyr Cys Asp Leu Ser Ala Glu Thr Ser
 1 5 10 15
 Asp Tyr Glu His Gln Tyr Tyr Ala Lys Val Lys Ala Ile Trp Gly Thr
 20 25 30
 Lys Cys Ser Lys Trp Ala Glu Ser Gly Arg Phe Tyr Pro Phe Leu Glu
 35 40 45
 Thr Gln Ile Gly Pro Pro Glu Val Ala Leu Thr Thr Asp Glu Lys Ser
 50 55 60
 Ile Ser Val Val Leu Thr Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu
 65 70 75 80
 Asp Leu Pro Val Ser Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn
 85 90 95
 Val Ser Val Leu Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val
 100 105 110
 Thr Asn His Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr
 115 120 125
 Cys Val His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln
 130 135 140

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Pro Ser Glu Lys Gln Cys
145 150

<210> 67
<211> 196
<212> PRT
<213> Homo sapiens

<400> 67

Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser Thr Asn Met Lys His
1 5 10 15
Leu Leu Met Trp Ser Pro Val Ile Ala Pro Gly Glu Thr Val Tyr Tyr
20 25 30
Ser Val Glu Tyr Gln Gly Glu Tyr Glu Ser Leu Tyr Thr Ser His Ile
35 40 45
Trp Ile Pro Ser Ser Trp Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp
50 55 60
Val Thr Asp Asp Ile Thr Ala Thr Val Pro Tyr Asn Leu Arg Val Arg
65 70 75 80
Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys His Pro
85 90 95
Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr
100 105 110
Lys Asp Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln
115 120 125
Phe Glu Phe Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu
130 135 140
His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr
145 150 155 160
Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
165 170 175
Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu Val
180 185 190
Gln Gly Glu Ala
195

<210> 68
<211> 203
<212> PRT
<213> Homo sapiens

<400> 68

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<210> 69
<211> 196
<212> PRT
<213> Homo sapiens

<400> 69

Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	Thr	Asn	Met	Lys	His
1				5					10					15	
Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	Gly	Glu	Thr	Val	Tyr	Tyr
			20					25					30		
Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	Ser	Leu	Tyr	Thr	Ser	His	Ile
		35					40					45			
Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp
		50				55					60				
Val	Thr	Asp	Asp	Ile	Thr	Ala	Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg
65				70						75				80	

Ala Thr Leu Gly Ser Gln Thr Ser Ala Trp Ser Ile Leu Lys His Pro
 85 90 95
 Phe Asn Arg Asn Ser Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Pro
 100 105 110
 Lys His Gly Phe His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln
 115 120 125
 Phe Glu Phe Leu Val Ala Tyr Trp Thr Arg Glu Pro Gly Ala Glu Glu
 130 135 140
 His Val Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr
 145 150 155 160
 Met Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
 165 170 175
 Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu Val
 180 185 190
 Gln Gly Glu Ala
 195

<210> 70

<211> 135

<212> PRT

<213> Homo sapiens

<400> 70

Cys Ser Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr
 1 5 10 15
 Ala Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
 20 25 30
 Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser Thr
 35 40 45
 Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe His Leu
 50 55 60
 Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe Leu Val Ala
 65 70 75 80
 Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val Lys Met Val Arg
 85 90 95
 Ser Gly Gly Ile Pro Val His Leu Glu Thr Met Glu Pro Gly Ala Ala
 100 105 110
 Tyr Cys Val Lys Ala Gln Thr Phe Val Lys Ala Ile Gly Arg Tyr Ser
 115 120 125
 Ala Phe Ser Gln Thr Glu Cys
 130 135

<210> 71

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<211> 135
 <212> PRT
 <213> Homo sapiens

<400> 71

Cys	Ser	Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr
1				5				10						15	
Ala	Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
			20				25						30		
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	Thr
		35					40					45			
Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Pro	Lys	His	Gly	Phe	His	Leu
		50				55				60					
Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	Leu	Val	Ala
65					70					75				80	
Tyr	Trp	Thr	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	Lys	Met	Val	Arg
			85					90						95	
Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	Glu	Pro	Gly	Ala	Ala
			100					105					110		
Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	Ala	Ile	Gly	Arg	Tyr	Ser
		115					120						125		
Ala	Phe	Ser	Gln	Thr	Glu	Cys									
		130				135									

<210> 72
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 72

Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser
1				5					10					15

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